? b 155
28jan03 11:06:21 User208669 Session D2199.1
$0.32 0.090 DialUnits File1
$0.32 Estimated cost File1
$0.01 TELNET
$0.33 Estimated cost this search
$0.33 Estimated total session cost 0.090 DialUnits

File 155:MEDLINE(R) 1966-2003/Jan W3
*File 155: Updating of completed records has resumed.See Help News155.
Alert feature enhanced with customized scheduling. See HELP ALERT.

Set Items Description
--- ----- -----------
? ds
Set Items Description
S1 26936 CMV OR HCMV OR CYTOMEGAL?
S2 837 (DNA OR GENE?)(W)VACCINE
S3 58 S1 AND S2
S4 42 CYTOMEGALO? AND S3
S5 612 CMV(1W)PROMOTER
S6 36 S4 NOT S5
S7 48 US28
S8 39 S1 AND S7
S9 22 UL33 OR UL78
S10 12 S1 AND S9
? t s3/7/13 31 6
3/7/13
DIALOG(R)File 155:MEDLINE(R)
12942078 21826672 PMID: 11836387
Strong CD8 T-cell responses following coimmunization with plasmids expressing the dominant pp89 and subdominant M84 antigens of murine cytomegalovirus correlate with long-term protection against subsequent viral challenge.
Ye Ming; Morello Christopher S; Spector Deborah H
Molecular Biology Section, Division of Biology, University of California San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0366, USA.
Journal of virology (United States) Mar 2002, 76 (5) p2100-12, ISSN 0022-538X Journal Code: 0113724
Contract/Grant No.: T32 AI 07036; AI; NIAID
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
We previously showed that intradermal immunization with plasmids expressing the murine cytomegalovirus (MCMV) protein IE1-pp89 or M84 protects against viral challenge and that coimmunization has a synergistic protective effect (C. S. Morello, L. D. Cranmer, and D. H. Spector, J. Virol. 74:3696-3708, 2000). Using an intracellular gamma interferon cytokine staining assay, we have now characterized the CD8+ T-cell response after DNA immunization with pp89, M84, or pp89 plus M84. The pp89- and M84-specific CD8+ T-cell responses peaked rapidly after three immunizations. DNA immunization and MCMV infection generated similar levels of pp89-specific CD8+ T cells. In contrast, a significantly higher level of M84-specific CD8+ T cells was elicited by DNA immunization than by MCMV infection. Fusion of ubiquitin to pp89 enhanced the CD8+ T-cell response only under conditions where vaccination was suboptimal. Three immunizations with either pp89, M84, or pp89 plus M84 DNA also provided significant protection against MCMV infection for at least 6 months, with the best protection produced by coimmunization. A substantial percentage of antigen-specific CD8+ T cells remained detectable, and they responded rapidly to the MCMV challenge. These results underscore the importance of considering antigens that do not appear to be highly immunogenic during infection as DNA vaccine candidates.
Record Date Created: 20020211

3/7/31
DIALOG(R)File 155:MEDLINE(R)
10663016 20193809 PMID: 10729145
Suppression of murine cytomegalovirus (MCMV) replication with a DNA vaccine encoding MCMV M84 (a homolog of human cytomegalovirus pp65).
Morello C S; Cranmer L D; Spector D H
Department of Pathology, University of California, San Diego, La Jolla, California 92093-0366, USA.
Journal of virology (UNITED STATES) Apr 2000, 74 (8) p3696-708, ISSN 0022-538X Journal Code: 0113724
Contract/Grant No.: AI20954; AI; NIAID; GM07198; GM; NIGMS
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
The cytotoxic T-lymphocyte (CTL) response against the murine cytomegalovirus (MCMV) immediate-early gene 1 (IE1) 89-kDa phosphoprotein pp89 plays a major role in protecting BALB/c mice against the lethal effects of the viral infection. CTL populations specific to MCMV early-phase and structural antigens are also generated during infection, but the identities of these antigens and their relative contributions to overall immunity against MCMV are not known. We previously demonstrated that DNA vaccination with a pp89-expressing plasmid effectively generated a CTL response and conferred protection against infection (J. C. Gonzalez Armas, C. S. Morello, L. D. Cranmer, and D. H. Spector, J. Virol. 70:7921-7928, 1996). In this report, we have sought (i) to identify other viral antigens that contribute to immunity against MCMV and (ii) to determine whether the protective response is haplotype specific. DNA

immunization was used to test the protective efficacies of plasmids encoding MCMV homologs of human cytomegalovirus (HCMV) tegument (M32, M48, M56, M82, M83, M69, and M99), capsid (M85 and M86), and nonstructural antigens (IE1-pp89 and M84). BALB/c (H-2(d)) and C3H/HeN (H-2(k)) mice were immunized by intradermal injection of either single plasmids or cocktails of up to four expression plasmids and then challenged with sublethal doses of virulent MCMV administered intraperitoneally. In this way, we identified a new viral gene product, M84, that conferred protection against viral replication in the spleens of BALB/c mice. M84 is expressed early in the infection and encodes a nonstructural protein that shares significant amino acid homology with the HCMV UL83-pp65 tegument protein, a major target of protective CTLs in humans. Specificity of the immune response to the M84 protein was confirmed by showing that immunization with pp89 DNA, but not M84 DNA, protected mice against subsequent infection with an MCMV deletion mutant lacking the M84 gene. The other MCMV genes tested did not generate a protective response even when mice were immunized with vaccinia viruses expressing the viral proteins. However, the M84 plasmid was protective when injected in combination with nonprotective plasmids, and coimmunization of BALB/c mice with pp89 and M84 provided a synergistic level of protection in the spleen. Viral titers in the salivary glands were also reduced, but not to the same extent as observed in the spleen, and the decrease was seen only when the BALB/c mice were immunized with pp89 plus M84 or with pp89 alone. The experiments with the C3H/HeN mice showed that the immunity conferred by DNA vaccination was haplotype dependent. In this strain of mice, only pp89 elicited a protective response as measured by a reduction in spleen titer. These results suggest that DNA immunization with the appropriate combination of CMV genes may provide a strategy for improving vaccine efficacy.

Record Date Created: 20000426

3/7/6
DIALOG(R)File 155:MEDLINE(R)
13500812 22093569 PMID: 12098766

DNA immunization with recombinant HCV E2 expression plasmids.

Zhu Jun; Wang Chun-Lin; Zhu Li-Xin; Kong Yu-Ying; Wang Yuan; Li Guang-Di
State Key Laboratory of Molecular Biology, Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, the Chinese Academy of Sciences, Shanghai 200031, China. wangyuan@server.shcnc.ac.cn

Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao (Shanghai) (China) Jul 2002, 34 (4) p445-51, ISSN 0582-9879 Journal Code: 20730160R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

DNA-based immunization, the delivery of plasmid DNA by direct inoculation, is a newly developed method of vaccination. Besides of many advantages, DNA immunization was demonstrated to generate weaker antibody and CTL responses than did protein and live attenuated vaccines, respectively. To circumvent this shortage, several methods were tested such as using different vector, changing injection mode, and co-expressing cytokines, etc. The studies showed that many factors could greatly affect the immune responses to DNA vaccine. The aim of this study is to compare different vectors for the presentation of the HCV E2 to generate immune responses by using DNA-based immunization. Four expression plasmids, with different promoter types and with or without signal sequences were constructed, which encode C-terminally truncated E2 (384-660) with HBV preS1 21-47 tag fused to its N-termini. Transient expression in HeLa cells showed that only recombinant plasmids with signal sequence could be expressed and properly processed, and the product could be secreted into medium. Protein expression level is slightly higher in plasmids with CMV promoter than with EF1alpha promoter. After immunization of C57BL/6 mice, all the recombinant constructs could elicit both anti-preS1 and anti-E2 antibodies. But only pCMV Sec-S1E2t660 with both CMV promoter and signal sequence could induce high-level and long-lasting antibody, showing that it is a good vaccine candidate. Possible reasons for the different immune responses to these constructs were discussed.

Record Date Created: 20020705

? t s10/7/7
10/7/7
DIALOG(R)File 155:MEDLINE(R)
10373667 99370163 PMID: 10438809

Deletion of the R78 G protein-coupled receptor gene from rat cytomegalovirus results in an attenuated, syncytium-inducing mutant strain.

Beisser P S; Grauls G; Bruggeman C A; Vink C
Department of Medical Microbiology, Cardiovascular Research Institute Maastricht, Maastricht University, 6202 AZ Maastricht, The Netherlands.

Journal of virology (UNITED STATES) Sep 1999, 73 (9) p7218-30, ISSN 0022-538X Journal Code: 0113724
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

The rat cytomegalovirus (RCMV) R78 gene belongs to an uncharacterized class of viral G protein-coupled receptor (GCR) genes. The predicted amino acid sequence of the R78 open reading frame (ORF) shows 25 and 20% similarity with the gene products of murine cytomegalovirus M78 and human cytomegalovirus UL78, respectively. The R78 gene is transcribed throughout the early and late phases of infection in rat embryo fibroblasts (REF) in vitro. Transcription of R78 was found to result in three different mRNAs: (i) a 1.8-kb mRNA containing the R78 sequence, (ii) a 3.7-kb mRNA containing both R77 and R78 sequences, and (iii) a 5.7-kb mRNA containing at least ORF R77 and ORF R78 sequences. To investigate the function of the R78 gene, we generated two different recombinant virus strains: an RCMV R78 null mutant (RCMVDeltaR78a) and an RCMV mutant encoding a GCR from which

the putative intracellular C terminus has been deleted (RCMVDeltaR78c). These recombinant viruses replicated with a 10- to 100-fold-lower efficiency than wild-type (wt) virus in vitro. Interestingly, unlike wt virus-infected REF, REF infected with the recombinants develop a syncytium-like appearance. A striking difference between wt and recombinant viruses was also seen in vivo: a considerably higher survival was seen among recombinant virus-infected rats than among RCMV-infected rats. We conclude that the RCMV R78 gene encodes a novel GCR-like polypeptide that plays an important role in both RCMV replication in vitro and the pathogenesis of viral infection in vivo.

Record Date Created: 19990907

? log hold

28jan03 11:17:29 User208669 Session D2199.2

$7.70 2.405 DialUnits File155

$0.00 109 Type(s) in Format 6

$0.84 4 Type(s) in Format 7

$0.84 113 Types

$8.54 Estimated cost File155

$2.60 TELNET

$11.14 Estimated cost this search

$11.47 Estimated total session cost 2.496 DialUnits

Logoff: level 02.12.20 D 11:17:29